Tshwane University of Technology
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YEAR:	2018
EXAMINATION:	C

May Main

SUBJECT NAME:	DEVELOPMENT SOFTWARE IV
SUBJECT CODE:	DSO401T
QUALIFICATION(S):	BTech: IT: Software Development (BTIS05)

PAPER DESCRIPTION: Computer-based   **DURATION:** 4 Hrs   **PAPER:** Only

SPECIAL REQUIREMENTS

- ☒ NONE
- ☐ NON-PROGRAMMABLE POCKET CALCULATOR
- ☐ SCIENTIFIC CALCULATOR
- ☐ COMPUTER ANSWER SHEET
- ☐ GRAPH PAPER
- ☐ DRAWING INSTRUMENTS

OTHER: Database sample table description

INSTRUCTIONS TO CANDIDATES: Answer all questions

Submit your question paper to the examiner / invigilator(s) after the examination with your student#, name and PC# clearly written on it.

TOTAL NUMBER OF PAGES INCLUDING COVER PAGE: 4

TOTAL NUMBER OF ANNEXURES:

EXAMINER:	SA Odunaike	**FULL MARKS:**	100
MODERATOR:	A Dandadzi	**TOTAL MARKS:**	100

Question 1 [40]

Create a set of stored procedures and function that are used to extract information about customer and their order respectively as shown below and their requirement are specified through questions1.1 – 1.4:

1.1 Design a procedure that will accept an order number and later extract the customer information as shown below: (10)

> **Enter value for order_no: 1001**
> **Customer details:**
> **JAKE LUCAS**
> **114 EAST SAVANNAH**
> **ATLANTA GA (30314)**
> **Referral: None**

1.2 Construct another procedure that will receive the same order identification number as in 1.1 above and extract the information relating to the order as shown below: (10)

> **Order details:**
> **1 . 9247381001-HOW TO MANAGE THE MANAGER By W.White 1 31.95 31.95**
> **2 . 2491748320-PAINLESS CHILD-REARING By R.Robinson 1 89.95 89.95**
> **Sub Total: 121.9**

1.3 Develop a function is required that will receive the same order identification number as in 1.1 above and then calculates the VAT due at 14% as shown below: (10)

> **Vat: 17.07**

1.4 Develop a PL/SQL anonymous block that will call all the procedures and the function as specified in Q1.1 –Q1.3. Make provision to handle invalid data error. (10)

> **Enter value for order_no: 1007**
> **Custom details:**
> **TAMMY GIANA**
> **9153 MAIN STREET**
> **AUSTIN TX (78710)**
> **Referral: Yes**
> **Order details:**
> **1 . 3957136468-HOLY GRAIL OF ORACLE By J.Austin 3 75.95 227.85**
> **2 . 9959789321-E-BUSINESS THE EASY WAY By J.Jones 1 54.5 54.5**
> **3 . 8117949391-BIG BEAR AND LITTLE DOVE By R.Robinson 1 8.95 8.95**
> **4 . 8843172113-DATABASE IMPLEMENTATION By T.Peterson 1 55.95 55.95**
> **Sub Total: 347.25**
> **Vat: 48.62**
> **Total: 395.87**

Question 2   [15]

Develop a PL/SQL package and body called **ADD_ORDER** that uses overloaded procedures to add new order information into the required table. The first definition of the overloaded procedure defines all columns to be provided explicitly as parameter to the procedure. The second definition of the overloaded procedure defines all columns to be provided explicitly as parameters to the procedure except the order number which is generated from the last known order number value.

Question 3   [25]

Create a procedure called Pub_Report that will accept three parameters (customer number, file directory and file name) to generate a text file report of all orders per given customer. Make provision to handle errors of invalid file handling and write error (application error -20001 and -20002 respectively) resulting from the use of UTF_FILE package.

CUSTOMER ORDER REPORT:
GENERATED ON: 18-APR-12

Customer details:
1007-TAMMY GIANA
9153 MAIN STREET
AUSTIN TX (78710)

Order details:

1007	1. 3957136468-HOLY GRAIL OF ORACLE By J.Austin	3	75.95	227.85
	2. 9959789321-E-BUSINESS THE EASY WAY By J.Jones	1	54.5	54.5
	3. 8117949391-BIG BEAR AND LITTLE DOVE By R.Robinson	1	8.95	8.95
	4. 8843172113-DATABASE IMPLEMENTATION By T.Peterson	1	55.95	55.95
1014	1. 0401140733-REVENGE OF MICKEY By J.Jones	2	22	44

Total: R392
Total No of goods: 8

*** End of Report ***

Question 4 [20]

4.1 Construct a view called **CATEGORY_COSTS** that contains the isbn#, title, category, cost and retail for all books. (5)

4.2 Develop a trigger called **CATEGORY_COSTS** to modify or remove a record from the base tables through your view created in the previous answer. When modifying the cost, perform the transaction as specified. However, when modifying the retail, ensure that the retail is not increased by more than 25%. In such a case the trigger must raise an appropriate application error message. (15)